

Claims:

1. A method for coating a surface of a continuous web which fibrous portion consist of papermaking fibres, with a coating powder comprising steps of:
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- allowing the web to move between electrodes, which are in different potentials,
  - applying the coating powder comprising inorganic material and polymeric binder material on the surface of the web by utilizing the

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  - finishing the coated surface of the web,
- characterized** in that the coating powder comprises 10.1 – 99.5 wt.-% of inorganic material.
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2. The method according to claim 1, **characterized** in that the coating powder comprises preferably at least 70 wt.-% of inorganic material and more preferably at least 80 wt.-% of inorganic material.
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3. The method according to claim 1 or 2, **characterized** in that the coating powder comprises preferably at the most 99 wt.-% of inorganic material and more preferably at the most 95 wt.-% of inorganic material.
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4. The method according to any preceding claim, **characterized** in that the coating powder is pre-charged.
5. The method according to any preceding claim, **characterized** in that the web is grounded by a moving device.
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6. The method according to any preceding claim, **characterized** in that after applying the coating powder the coated surface is treated at least in a nip formed between a heated roll and a resilient roll.
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7. The method according to any preceding claim 1 – 5, **characterized** in that after applying the coating powder the coated surface is treated in a substantially long nip formed between two counter surfaces.

8. The method according to any preceding claim, **characterized** in that the both sides of the web are coated simultaneously or the both sides of the web are coated sequentially.
- 5 9. The method according to any preceding claim, **characterized** in that at least one additional layer is formed on the coated surface by the dry surface treatment process.
- 10 10. A dry surface treated sheet material comprising a substrate which fibrous portion consist of papermaking fibres, and a coating layer including inorganic material and polymeric binder material, **characterized** in that the coating layer comprises 10.1 – 99.5 wt.-% of inorganic material.
- 15 11. The sheet material according to claim 10, **characterized** in that the coating powder comprises preferably at least 70 wt.-% of inorganic material and more preferably at least 80 wt.-% of inorganic material.
- 20 12. The sheet material according to claim 10 or 11, **characterized** in that the coating powder comprises preferably at the most 99 wt.-% of inorganic material and more preferably at the most 95 wt.-% of inorganic material.
- 25 13. The sheet material according to any preceding claim 10 - 12, **characterized** in that the coating powder comprises either separate inorganic material particles and polymeric binder material particles or particles including both inorganic material and polymeric binder material.
- 30 14. A dry-coating powder comprising inorganic material and polymeric binder material, **characterized** in that the coating powder comprises 10.1 – 99.5 wt.-% of inorganic material.
- 35 15. The powder according to claim 14, **characterized** in that the coating powder comprises preferably at least 70 wt.-% of inorganic material and more preferably at least 80 wt.-% of inorganic material.

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16. The powder according to claim 14 or 15, **characterized** in that the coating powder comprises preferably at the most 99 wt.-% of inorganic material and more preferably at the most 95 wt.-% of inorganic material.

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17. The powder according to any preceding claim 14 - 16, **characterized** in that the coating powder comprises either separate inorganic material particles and polymeric binder material particles or particles including both inorganic material and polymeric binder material.

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18. The powder according to any preceding claim 17, **characterized** in that an average diameter of the material particles has been chosen so that it is larger than an average diameter of pores of the web to be coated.

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19. The powder according to claim 17 or 18, **characterized** in that the average diameter of the material particles is 0.1 – 500  $\mu\text{m}$ , preferably 1 – 15  $\mu\text{m}$ .

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